



Thaw and Culture Details

Cell Line Name	MCW020i-A2023
WiCell Lot Number	WB67311
Parent Material	MCW020i-A2023-DB66325
Provider	Medical College of Wisconsin – Laboratory of Dr. Ulrich Broeckel
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate.
Culture Platform	Feeder Independent
	Medium: TeSR™-E8™
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent E8 Medium Protocol
Passage Number	p16 These cells were cultured for 15 passages prior to freeze and post colony selection. WiCell adds +1 to the passage number at freeze to best represent the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 16.
Date Viald	20-September-2019
Vial Label	MCW020i-A2023 p16 WB67311
Biosafety and Use Information	Appropriate biosafety precautions should be followed when working with these cells. The end user is responsible for ensuring that the cells are handled and stored in an appropriate manner. WiCell is not responsible for damages or injuries that may result from the use of these cells. Cells distributed by WiCell are intended for research purposes only and are not intended for use in humans.

Testing Performed by WiCell

Test Description	Test Provider	Test Method	Test Specification	Result
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	See Report
	<p>Results: 46,XY,i(20)(q10)[6]/46,XY[14] Interpretation: This is an abnormal karyotype. There is an isochromosome of the long (q) arm of chromosome 20 in six of twenty cells examined. This imbalance results in trisomy for 20q and monosomy for 20p. Gain of chromosome 20q is a recurrent acquired abnormality in pluripotent stem cell cultures. No other clonal abnormalities were detected at the stated band level of resolution.</p>			
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305	≥ 15 Undifferentiated Colonies prior to passage, ≤ 30% Differentiation prior to passage, and recoverable attachment after passage	Pass
Identity by STR	UW Translational Research Initiatives in Pathology Laboratory	PowerPlex 16 HS System by Promega	Defines STR profile of deposited cell line	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-CH-044	Negative	Pass



Testing Reported by Provider

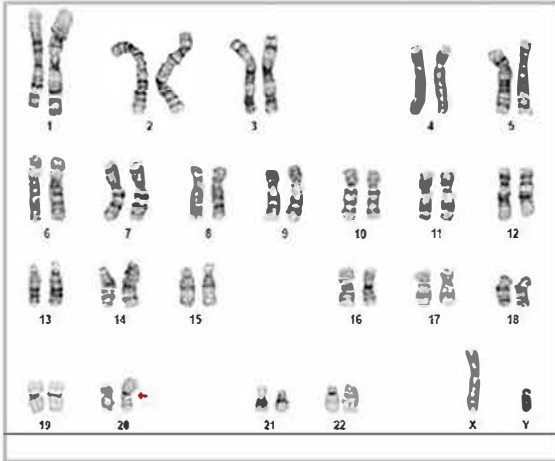
The Provider stated that some or all of the additional analyses listed below may have been performed for this cell line. For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

- Tra1-60 marker expression
- mRNA expression by qPCR
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval
18-June-2020	<p style="text-align: right;">6/18/2020</p> <p>X JKG JKG Quality Assurance Signed by: Gay, Jenna</p>

Date Reported: Thursday, February 6, 2020
Cell Line: MCW020i-A2023-WB67311 15258
Passage#: 16
Date of Sample: 1/30/2020
Specimen: Human iPSC
Results: 46,XY,i(20)(q10)[6]/46,XY[14]

Cell Line Sex: Male
Reason for Testing: Lot release testing
Investigator: ██████████, WiCell



Cell: 43
Slide: G03
Slide Type: Karyotype
Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 5
Band Resolution: 425 - 475

Interpretation:

This is an abnormal karyotype. There is an isochromosome of the long (q) arm of chromosome 20 in six of twenty cells examined. This imbalance results in trisomy for 20q and monosomy for 20p. Gain of chromosome 20q is a recurrent acquired abnormality in pluripotent stem cell cultures.

No other clonal abnormalities were detected at the stated band level of resolution.

Completed by: ██████████

Reviewed and Interpreted by: ██████████, Ph.D.

Date: _____ **Sent By:** _____ **Sent To:** _____ **QC Review By:** _____

Limitations: This assay allows for microscopic visualization of numerical and structural chromosome abnormalities. The size of structural abnormality that can be detected is >3-10Mb, dependent upon the G-band resolution obtained from this specimen. For the purposes of this report, band level is defined as the number of G-bands per haploid genome. It is documented here as "band level", i.e., the range of bands determined from the four karyograms in this assay. Detection of heterogeneity of clonal cell populations in this specimen (i.e., mosaicism) is limited by the number of metaphase cells examined, documented here as "n of cells counted".

This assay was conducted solely for listed investigator/institution. The results of this assay are for research use only. Unless otherwise mutually agreed in writing, the services provided to you hereunder by WiCell Research Institute, Inc. ("WiCell") are governed solely by WiCell's Terms and Conditions of Service, found at www.wicell.org/privacyandterms. Any terms you may attach to a purchase order or other document that are inconsistent, add to, or conflict with WiCell's Terms and Conditions of Service are null and void and of no legal force or effect.



HISTOLOGY - IHC - MOLECULAR - IMAGING

Department of Pathology and Laboratory Medicine
TRIP Laboratory (Molecular)
<https://research.pathology.wisc.edu/trip-home/>
(608) 265-9168

Short Tandem Repeat Analysis



Your Lab Partner

characterization@wicell.org
(608) 316-4145

Sample Report:

MCW020i-A2023-WB67311 15258 p.16 (80033) D01

Sample Name on Tube: MCW020i-A2023-WB67311 15258 p.16 (80033) D01
19.6 ng/ μ L, (A260/280=1.53)

Sample Type: DNA

Cell Count: N/A

Requestor:

WiCell Research Institute

Characterization Department

Receive Date: 02/03/20

Report Sent: 02/10/20

Assay Date: 02/04/20

File Name: STR 200207 wmr

Report Date: 02/07/20

STR Locus	STR Genotype Repeat #	STR Genotype
FGA	16-18,18.2,19,19.2,20,20.2,21,21.2,22, 22.2, 23, 23.2, 24, 24.2, 25, 25.2, 26-30, 31.2, 43.2, 44.2,45.2, 46.2	Identifying information has been redacted to protect donor confidentiality. If more information is required, please, contact WiCell's Technical Support .
TPOX	6-13	
D8S1179	7-18	
vWA	10-22	
Amelogenin	X,Y	
Penta D	2.2, 3.2, 5, 7-17	
CSF1PO	6-15	
D16S539	5, 8-15	
D7S820	6-14	
D13S317	7-15	
D5S818	7-16	
Penta E	5-24	
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	
D21S11	24,24.2,25,25.2,26-28,28.2,29,29.2, 30, 30.2,31, 31.2,32,32.2,33,33.2, 34,34.2,35,35.2,36-38	
TH01	4-9,9.3,10-11,13.3	
D3S1358	12-20	

Results: Based on the MCW020i-A2023-WB67311 15258 p.16 (80033) D01 DNA submitted by WiCell Characterization Department dated and received on 02/03/20, this sample (Label on Tube: MCW020i-A2023-WB67311 15258 p.16 (80033) D01) defines the STR profile of the human cell line MCW020i-A2023 comprising 29 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human MCW020i-A2023 cell line were detected and the concentration of DNA required to achieve an acceptable STR genotype (signal/ noise) was equivalent to that required for the standard procedure (~1 ng/amplification reaction) from human genomic DNA. This result suggests that the MCW020i-A2023-WB67311 15258 p.16 (80033) D01 sample submitted corresponds to the MCW020i-A2023 cell line and was not contaminated with any other human stem cells or a significant amount of mouse feeder layer cells.

Sensitivity: Sensitivity limits for detection of STR polymorphisms unique to either this or other human cell lines is ~2-5%.

X *RMB*

Digitally Signed on 02/10/20

_____, BA
TRIP Laboratory, Molecular

X *WMR*

Digitally Signed on 02/10/20

_____, PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Testing was accomplished by analysis of human genetic polymorphisms at STR loci. This methodology has not yet been approved by the FDA and is for investigational use only.

Acknowledge TRIP in your publications, posters & presentations. For details, see: <https://research.pathology.wisc.edu/acknowledging-trip/>
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Native Product Sterility Report



WiCell
504 S Rosa Road, Rm 101
Madison, WI 53719

SAMPLE #: 19100858
DATE RECEIVED: 10-Oct-19
TEST INITIATED: 16-Oct-19
TEST COMPLETED: 30-Oct-19

SAMPLE NAME / DESCRIPTION: WC059i-108-1-2-19 WB67322 15075
WC057i-108-1-2-02 WB67323 15076
PENN003i-661-4 DB36301 15058
PENN004i-277-1 DB36075 15059
SCR8401i DB43123 15048
SCR9602i DB43150 15049
MCW030i-A2688 WB67307 15050
MCW020i-A2023 WB67311 15054
WC024i-FXS-Nluc1 WB67318 15055
WC053i-FX08-25 WB67320 15057

UNIQUE IDENTIFIER: NA

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
10	0	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
10	TSB	40	20-25	14
10	FTG	40	30-35	14

REFERENCE: Processed according to LAB-003: Sterility Test Procedure

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: NA

REVIEWED BY _____

DATE 31 OCT 19

Specific test results may not be indicative of the characteristics of any other samples from the same lot or similar lots. This test report shall not be reproduced, except in full, without prior written approval. Liability is limited to the costs of the tests. Results applied to samples as received.



Mycoplasma Assay Report

PCR-based assay performed by WiCell

WiCell
29Jan20

FORM SOP-CH-048.01

Version B Edition 01

Sample Name	Result	Comments/Suggestions
MCW026i-50000685-WB67283 15256 (79973)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
UCSD128i-7-5-WB67390 15263 (79974)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW055i-U2054-DB66384 15246 (79976)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW030i-A2688-WB67307 15257 (79977)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW007i-U2456-WB67198 15252 (79978)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WC064i-247-1-2-22-WB67389 15259 (79979)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW013i-A2767-WB67191 15253 (79980)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW035i-A3267-WB67388 15251 (79981)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW020i-A2023-WB67311 15258 (79982)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW054i-U2073-DB66383 15247 (79989)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Reported by: [REDACTED], Cell Culture Specialist

Reviewed by: [REDACTED], Cell Culture Specialist

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A gel image is available upon request.